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EXAMINER
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BOYD, JENNIFER A

ART UNIT	PAPER NUMBER
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1771

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Please find below and/or attached an Office communication concerning this application or proceeding.



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**BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES**

Application Number: 10/065,436  
Filing Date: October 17, 2002  
Appellant(s): TRAVELUTE ET AL.

\_\_\_\_\_  
Philip Summa  
For Appellant

**EXAMINER'S ANSWER**

**MAILED**

**DEC 01 2005**

**GROUP 1700**

This is in response to the appeal brief filed August 31, 2005 appealing from the Office action mailed December 21, 2004.

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**(1) Real Party in Interest**

A statement identifying by name the real party in interest is contained in the brief.

**(2) Related Appeals and Interferences**

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

**(3) Status of Claims**

The statement of the status of claims contained in the brief is correct.

**(4) Status of Amendments After Final**

No amendment after final has been filed.

**(5) Summary of Claimed Subject Matter**

The summary of claimed subject matter contained in the brief is correct.

**(6) Grounds of Rejection to be Reviewed on Appeal**

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

**(7) Claims Appealed**

The copy of the appealed claims contained in the Appendix to the brief is correct.

**(8) Prior Art of Record**

US 4,336,307	SHIOZAKI et al.	06-1982
JP S57-139600	TADASHI HIRAKAWA et al.	08-1982
JP H3-287848	SHIGERU TAMIYA et al.	12-1991
US 6,368,990	JENNERGREN et al.	04-2002

**(9) Grounds of Rejection**

The following ground(s) of rejection are applicable to the appealed claims:

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 2, 4, 5 and 11 – 15 are rejected under 35 U.S.C. 102(b) as being anticipated by Shiozaki et al. (US 4,336,307).

Shiozaki is directed to a hollow water absorbing polyester filaments and the process for making the same (Title).

As to claim 2, Shiozaki teaches hollow water absorbing polyester filaments (Abstract). Shiozaki teaches that the filaments have a number of fine pores through which the hollow is connected to the outside of the filament and each exhibiting excellent water and moisture absorbing property (column 1, lines 10 – 15). It is the position of the Examiner that the pores and the hollow portion of the filament are “sufficient openings” to fill with liquid, in this case, water.

As to claim 4, Shiozaki teaches that the hollow polyester filament may be in the form of staple fibers (column 6, lines 50 – 60).

As to claim 5, Shiozaki teaches that the hollow polyester filament can be in the form of a yarn or fiber (column 6, lines 50 – 60). It is the position of the Examiner that because the filament is in the form of a fiber, it has Appellant's "length sufficient to exhibit fiber properties".

As to claim 11, Shiozaki teaches that the polyester filament may have a round cross-sectional profile and the hollow may be round (column 5, lines 35 – 45).

As to claim 12, Shiozaki teaches that the polyester filament may have a round cross-sectional profile and the hollow may be irregular shaped such as multilobal (column 5, lines 35 – 55).

As to claim 13, Shiozaki teaches that the polyester filament may have an irregular shaped such as multilobal and the hollow may have a round shape (column 5, lines 35 – 50).

As to claim 14, Shiozaki teaches that the polyester filament may have an irregular cross-sectional profile and an irregular hollow shape (column 5, lines 35 – 50).

As to claim 15, Shiozaki teaches hollow water absorbing polyester filaments (Abstract). Shiozaki teaches that the filaments have a number of fine pores through which the hollow is connected to the outside of the filament and each exhibiting excellent water and moisture absorbing property (column 1, lines 10 – 15). It is the position of the Examiner that the pores and the hollow portion of the filament are "sufficient openings" to fill with liquid, in this case, water. Shiozaki teaches that the polyester filament is preferably polyethylene terephthalate (column 3, lines 35 – 40). It should be noted that the Examiner has interpreted "consisting essentially of" as "comprising. It should be noted that the transitional phrase "consisting essentially of" limits the scope of a claim to the specified materials or steps "and those that do not materially affect the basic and novel characteristic(s)" of the claimed invention. *In re Herz*,

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537 F.2d 549, 551-52, 190 USPQ 461, 463 (CCPA 1976). The burden is upon the Appellant to show that the additional components do affect the basic and novel characteristics of the invention. For the purposes of searching for and applying prior art under 35 U.S.C. 102 and 103, absent a clear indication in the specification or claims of what the basic and novel characteristics actually are, “consisting essentially of” will be construed as equivalent to “comprising.” See MPEP 2111.03.

***Claim Rejections - 35 USC § 102/103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 2, 4 – 10 and 72 – 80 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over JP 57139600A.

JP 57139600A is directed to non-woven fabric having a soft and good handle used in sanitary goods (Abstract).

JP 57139600A teaches a non-woven fabric comprising drawn polyester staple fibers having a linear density of up to 3 denier as required by claims 78 – 80 and having a length of 1 – 15 mm (0.04 - 0.6 inch) as required by claims 7 and 76 - 77. JP 57139600A notes that the drawn polyester fibers can be hollow (Abstract). In section 3 of the complete translation of JP 57139600A, the use of polyester derived from terephthalate is discussed as required by claim 75. In the Example, 50% drawn polyethylene terephthalate staple fibers and 50% undrawn

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polyethylene terephthalate fibers are used to create the nonwoven fiber sheet. Although, JP 57139600A might not specifically disclose the nature of the type of liquids that can be filled in the hollow fibers as required by claims 2 and 72, it is reasonable to assume that sanitary goods are traditionally used to absorb water-based liquids. Furthermore, the JP 57139600A meets all physical and structural limitations and absent any evidence to the contrary, it would be reasonable to assume that the fabric of JP 57139600A can function in the same capacity as the fabric of the Appellant.

Although JP 57139600A does not explicitly teach the claimed having a length sufficient to support a meniscus of water at each end thereof as required by claim 6, a minimum length sufficient to support a meniscus of water in the coaxial opening and a maximum length at which the filament will fill entirely with a liquid as required by claim 72 and the maximum length is the length above which air pressure between a meniscus at each end of the filament will prevent the opening from filling entirely with the selected liquid as required by claim 73, it is reasonable to presume that those properties are inherent to JP 57139600A. Support for said presumption is found in the use of like materials (i.e. a polyester staple filament having a length between 1 – 15 mm and a denier of up to 3) which would result in the claimed property. The burden is upon the Appellant to prove otherwise. *In re Fitzgerald* 205 USPQ 594. In addition, the presently claimed property of minimum length sufficient to support a meniscus of water in the coaxial opening and a maximum length at which the filament will fill entirely with a liquid as required by claim 72 and the maximum length is the length above which air pressure between a meniscus at each end of the filament will prevent the opening from filling entirely with the selected liquid as required by claim 73 would obviously have been present once the JP 57139600A product is provided.

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Note *In re Best*, 195 USPQ at 433, footnote 4 (CCPA 1977) as to providing of this rejection made above under 35 USC 102.

***Claim Rejections - 35 USC § 103***

Claims 16 – 38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tamiya et al. (JP 03-287848) in view of Jennergren.

Tamiya is directed to bulky nonwoven fabric composed of a hollow composite fiber preferably used for liquid absorbing material such as diapers (Title from Derwent translation, Use/Advantage from Derwent translation and Purpose from JPO translation).

As to claim 16, Tamiya teaches a fabric composed of composite fiber consisting of two polymers and a hollow section as the core component. In example 1, Tamiya indicates that the sheath-core fiber is a continuous filament. It should be noted that Tamiya uses the generic term “fiber” which by definition is a unit of matter that forms the basic element of fabrics and other textile structures and is characterized by having a length at least 100 times its diameter or width. It is unclear in the English translation as to whether the fiber of Tamiya is in filament form, staple form or can be in both forms.

As to claim 17, Tamiya teaches that polymer A having a high melting point which surrounds the hollow core component and polymer B has a low melting point which functions as the sheath. See Figure 1 in the Japanese language Patent Application. Tamiya teaches that polymer A can be polyethylene terephthalate (Abstract from Derwent).

As to claim 18, Tamiya teaches a fiber with a hollow core indicated by 2 in Figure 1.



As to claim 19, Tamiya teaches that the fiber has respective circular cross-sections as seen in Figure 1.

As to claims 23 and 24, Tamiya teaches that the fiber has an asymmetric cross-section in Figure 1. It should be noted that the location of the hollow portion is off-center resulting in a fiber that lacks symmetry in the cross-sectional area.

As to claim 28, Tamiya teaches a fabric composed of composite fiber consisting of two polymers and a hollow section as the core component. Tamiya teaches that polymer A having a high melting point which surrounds the hollow core component and polymer B has a low melting point which functions as the sheath. See Figure 1 in the Japanese language Patent Application. Tamiya teaches that polymer A can be polyethylene terephthalate (Abstract from Derwent). It should be noted that the Examiner has interpreted “consisting essentially of” as “comprising”; please note the comments in the above rejection concerning the reasons for this interpretation. Also, it should be noted that Tamiya uses the generic term “fiber” which by definition is a unit of matter that forms the basic element of fabrics and other textile structures and is characterized by having a length at least 100 times its diameter or width. It is unclear in the English translation as to whether the fiber of Tamiya is in filament form, staple form or can be in both forms.

As to claims 29 and 30, Tamiya teaches a fiber comprising a hollow section (Abstract). It is the position of the Examiner that the hollow section provides “sufficient openings to substantially fill with liquid”. Tamiya teaches that the fabric made of the hollow fibers is used for liquid-absorbing material applications such as paper napkins (Use/Advantage of JPO translation). Although, Tamiya might not specifically disclose the nature of the type of liquids that can be filled in the hollow fibers, it is reasonable to assume that paper napkins are

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traditionally used to absorb water-based liquids. Furthermore, Tamiya meets all physical and structural limitations set forth by the claims 29 and 30. Absent any evidence to the contrary, it would be reasonable to assume that the fabric of Tamiya can function in the same capacity as the fabric of the Appellant.

As to claim 31, Tamiya teaches that polymer A having a high melting point which surrounds the hollow core component and polymer B has a low melting point which functions as the sheath. See Figure 1 in the Japanese language Patent Application. Tamiya teaches that polymer A can be polyethylene terephthalate (Abstract from Derwent).

As to claim 32, Tamiya teaches that the fiber has an asymmetric cross-section in Figure 1. It should be noted that the location of the hollow portion is off-center resulting in a fiber that lacks symmetry in the cross-sectional area.

As to claim 37, Tamiya teaches a fabric composed of composite fiber consisting of two polymers and a hollow section as the core component. Tamiya teaches that polymer A having a high melting point which surrounds the hollow core component and polymer B has a low melting point which functions as the sheath. See Figure 1 in the Japanese language Patent Application. Tamiya teaches that polymer A can be polyethylene terephthalate (Abstract from Derwent). Tamiya teaches a fiber comprising a hollow section (Abstract). It is the position of the Examiner that the hollow section provides “sufficient openings to substantially fill with liquid”. Tamiya teaches that the fiber has an asymmetric cross-section in Figure 1. It should be noted that the location of the hollow portion is off-center resulting in a fiber that lacks symmetry in the cross-sectional area. It should be noted that the Examiner has interpreted “consisting essentially of” as “comprising”; please note the comments in the above rejection concerning the reasons for this

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interpretation. Also, it should be noted that Tamiya uses the generic term “fiber” which by definition is a unit of matter that forms the basic element of fabrics and other textile structures and is characterized by having a length at least 100 times its diameter or width. It is unclear in the English translation as to whether the fiber of Tamiya is in filament form, staple form or can be in both forms.

As to claim 38, Tamiya teaches that the fabric made of the hollow fibers is used for liquid-absorbing material applications such as paper napkins (Use/Advantage of JPO translation). Although, Tamiya might not specifically disclose the nature of the type of liquids that can be filled in the hollow fibers, it is reasonable to assume that paper napkins are traditionally used to absorb water-based liquids. Furthermore, Tamiya meets all physical and structural limitations set forth by the claims 29 and 30. Absent any evidence to the contrary, it would be reasonable to assume that the fabric of Tamiya can function in the same capacity as the fabric of the Appellant.

Tamiya fails to teach that the hollow fiber is in filament form as required by claims 16 – 19, 23 – 24 and 29 – 32 and that the hollow fiber is in staple form as required by claims 20 – 22, 25 – 27, 28, 33 and 37 - 38.

Jennergren is directed to fabrics formed of hollow filaments and hollow staple fibers useful in numerous applications such as medical garments and disposable absorbent products (Abstract). In one embodiment of the invention, the fabrics include a plurality of hollow continuous spunbonded filaments and in another embodiment, the fabrics include a plurality of hollow staple fibers (column 2, lines 18 – 22). Jennergren does not indicate that hollow filaments

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are advantageous when compared to hollow staple fibers or that hollow staple fibers are advantageous when compared to hollow filaments; it is implied that the use of hollow filaments or hollow staple fibers depends on the type of absorptive material being produced.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use hollow fibers in filament form or hollow fibers in staple form as implied by Jennergren when creating the absorptive fabric of Tamiya motivated by the desire to create an absorptive material suitable for various applications.

As to claims 16 and 28, although Tamiya in view of Jennergren does not explicitly teach the claimed moisture absorption capability of between about 10 and 30 percent by volume, it is reasonable to presume that moisture absorption capability is inherently between 10 and 30 percent by volume. Support for said presumption is found in the use of like materials (i.e. a hollow filament consisting essentially of polyethylene terephthalate which is used for liquid-absorbing materials indicating a level of moisture absorptivity) which would result in the claimed property. The burden is upon the Appellant to prove otherwise. *In re Fitzgerald* 205 USPQ 594. In addition, the presently claimed property of moisture absorption capability of between about 10 and 30 percent by volume would obviously have been present once the Tamiya in view of Jennergren product is provided. Note *In re Best*, 195 USPQ at 433, footnote 4 (CCPA 1977).

As to claim 34, Tamiya in view of Jennergren discloses the claimed invention except for that the length of the fiber is between one-quarter inch and two inches. It should be noted that the length of the fiber is a result effective variable. For example, the length of the fiber governs the

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water absorption capacity. It would have been obvious to one having ordinary skill in the art at the time the invention was made to create a fiber with a length between one-quarter inch and two inches since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980). In the present invention, one would have been motivated to optimize the length of the fiber in order to create a highly absorptive material.

As to claims 35 – 36, the details of the patent are discussed above.

#### **(10) Response to Argument**

Appellant argues that the Office has failed to provide an anticipatory reference (in regards to the rejection of claims 2, 4, 5 and 11 – 15 as being anticipated by US 4,336,307 to Shiozaki et al.). Appellant argues that the inclusion of the pore forming agent of Shiozaki materially affects the basic and novel characteristics of the filament. The Examiner submits that there is no evidence of record to substantiate Appellant's allegation. Additionally, the Appellant has not clearly defined the "basic and novel characteristics". The Examiner previously submitted that it appears that Appellant is arguing that the basic and novel characteristic is the ability to fill with a liquid. If the basic and novel characteristics of the Appellant's invention is the ability to fill with a liquid, nothing added by Shiozaki impairs that characteristic. If the basic and novel characteristic is not simply "the ability to fill with a liquid" as the Appellant contends, the Appellant must clearly set forth on record the basic and novel characteristics. Furthermore, the Appellant must evidence that the addition of the pore forming agent impacts the basic and novel characteristics. As noted, such evidence is lacking; see MPEP 2112.

Appellant argues that the Office has failed to establish a 102/103 rejection (in regards to the rejection of claims 2, 4 – 10 and 72 – 80 as being anticipated or obvious over JP S57-139600A). Appellant notes that the Japanese publication mentions that the paper-like sheet material can contain “empty-core” fibers. Appellant submits that the mere recitation of “empty core” fails to meet the requirements of claims 2 and 72. In claim 72, Appellant requires that the minimum length is sufficient to support a meniscus of water and a maximum length at which the filament will fill entirely with a liquid. On page 5, [0025] of Appellant’s Specification, it is noted that fibers having a length between  $\frac{1}{4}$  - 2 inches will meet Appellant’s length requirements and thus be capable of being filled with a liquid. JP 57139600 A teaches that the polyester fiber is hollow and can have a length between 1 – 15 mm (0.04 - 0.6 inch). Thus, the Examiner submits that the fibers of JP 57139600 A would inherently “fill with water”. Additionally, it should be noted that Appellant does not require that the fibers retain water for a certain amount of time but only requires that they can be filled to some extent.

Appellant further argues that the fiber sheet of JP 57139600 A is regarded as hydrophobic and is suitable for use as a top sheet in hygiene or other products unlike the present invention is designed to fill with liquid. Although JP 57139600 A indicates that the fiber sheet is hydrophobic, JP 57139600 A meets each and every physical and chemical limitation of Appellant and therefore would inherently possess the ability to fill with a liquid. Additionally, Appellant argues that the use of empty-cores in JP 57139600 A is used to improve the flexibility and bulkiness of the sheet. Although Appellant’s invention may not be concerned with improving flexibility and bulkiness, JP 57139600 A still teaches Appellant’s invention. It should be noted “The use of patents as references is not limited to what the patentees describe as their

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own inventions or to the problems with which they are concerned. They are part of the literature of the art for all they contain”. *In re Heck*, 699 F.2d 1331, 1332-33, 216 USPQ 1038, 1039 (Fed. Cir. 1983) (quoting *In re Lemelson*, 397 F.2d 1006, 1009, 158 USPQ 275, 277 (CCPA 1968)). See MPEP 2123.

Appellant argues that the Office has failed to establish a case of obviousness (in regards to the rejection of claims 16 – 38 over JP H3-287848 to Tamiya et al. in view of US 6,368,990 to Jennergren et al.). Appellant argues that the thermal bonding step required by both Tamiya and Jennergren would destroy the absorptive capability of the instant invention by obliterating the sufficient openings that allow the substantial filling with water. It is not necessarily clear that the thermal bonding done would necessarily obliterate the hollow openings in the fibers and Appellant does not provide evidence in support of this argument.

In response to Appellant’s argument that Tamiya and Jennergren fail to teach the specified absorption capability range, the Examiner submits that the absorption capability range is inherent to the fibers of Tamiya in view of Jennergren. Since Tamiya in view of Jennergren reads on the claimed chemical and structural limitations, it is asserted that the claimed absorption capability must be inherent to the prior art product. If said property is not inherent, it is asserted that Appellant’s claim must be incomplete. In other words, if Appellant’s asserts a lack of inherency in the prior art product, then Appellant’s claimed invention is missing an element that is critical to the invention, which would patentably distinguish it from the known prior art. Appellant uses the language “consisting essentially of” in claims 28 and 37 and submits that the melting step of Tamiya and Jennergren would destroy the pores of the invention and thus would materially affect the basic and novel characteristics. The Appellant has failed to clearly set forth

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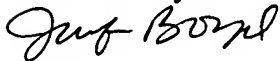
on record the basic and novel characteristics of the invention and provide evidence that melting the fibers would impact the basic and novel characteristics.

In response to Appellant's argument that the presence of two kinds of polymer in the hollow filaments of Tamiya (JP H3-287848) would materially affect the basic and novel characteristics of the invention, the Examiner respectfully submits that there is no evidence of record to substantiate Appellant's allegation. Appellant has not clearly set forth the basic and novel characteristics of the invention. Furthermore, the Appellant must evidence such addition impacts the basic and novel characteristics. As noted, such evidence is lacking; see MPEP 2112.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

Jennifer Boyd

  
**ULA RUDDOCK**  
**PRIMARY EXAMINER**

Conferees:

Terrel Morris - *Tm*

Carol Chaney *Carol Chaney*



**(11) Related Proceeding(s) Appendix**

No decision rendered by a court or the Board is identified by the examiner in the Related

Appeals and Interferences section of this examiner's answer.